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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JAGAN, MIRELLYS

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 04/23/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,334

Applicant(s)

YERLIKAYA ET AL.

Examiner

Mirellys Jagan

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 30 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 1/30/03 have been approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,347,476 to McBean, Sr. [hereinafter McBean] in view of U.S. Patent 4,260,058 to Paull et al [hereinafter Paull].

McBean discloses an electronic thermometer comprising:

a removable module (20) having mating terminals (26, 32, 30, 28). The removable module has a temperature-sensing assembly formed by a temperature sensor (22) connected to a memory chip (EEPROM 24) that stores calibration information and module specific algorithm parameters, and a cable assembly having a connecting portion with mating terminals for electrically connecting to a temperature calculating unit, and

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a temperature calculating unit (36) having a header assembly with terminals (44, 46, 50, and 48) in electrical connection with a microprocessor system, wherein the header assembly removably mates with the terminals of the removable module.

The memory is connected to the connecting portion and is capable of electrical communication with the temperature calculating unit when the removable module is installed to the calculating unit, and the calibration information includes at least two calibration reference point parameters wherein each of the parameters are taken at different temperatures. The memory chip stores a unique identification serial number to identify the type of module being used (see column 2, lines 37-68, column 3, lines 1-16, 20-38, and column 5, lines 8-10).

McBean does not disclose ~~the temperature sensor of the removable module being in a probe connected to the removable module~~, wherein the removable module ^{being} is capable of storing ^a the temperature sensitive probe and a supply of disposable probe covers, the memory storing ^{Probe} information for "identifying" ^{information} the probe, and the temperature-sensing assembly being a 'probe assembly'.

Paull discloses an electronic thermometer having a temperature-sensing module that includes a temperature sensor in a probe connected to the module. The temperature sensor is placed within the probe in order to facilitate taking temperature measurements of a person. The module stores the temperature sensitive probe in a chamber in order to protect the probe when it is not being used, and has a chamber housing a supply of disposable probe covers attached thereto in order to have clean probe covers readily available to a person using the module when taking temperature measurements.

Referring to claims 1, 2, 5, and 6, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module disclosed by McBean by placing the sensor in a probe connected to the module (thereby forming a probe assembly), as taught by Paull, when utilizing the module to measure the temperature of human beings since Paull discloses that using a probe is beneficial when measuring the temperature of a living body. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module disclosed by McBean by adding a chamber for storing the temperature sensitive probe in the module, and a chamber for storing a supply of disposable probe covers, as taught by Paull, in order to protect the probe when it is not being used and have clean probe covers readily available when using the module to take temperature measurements.

Further referring to claim 2, the memory chip in the removable module of McBean and Paull stores "probe-identifying" information since the removable module includes a probe and the stored information identifies the type of removable module being used (see the specification on page 21, lines 4-5, where it states that the information necessary for identifying the probe includes information related to the type of removable module being used).

Further referring to claim 5, in utilizing the device disclosed by McBean and Paull above to measure temperatures, the method steps of claim 5 would inherently be followed.

Referring to claim 9, the module-specific algorithm parameters in the memory chip of the thermometer of McBean and Paull are probe-specific parameters since the removable module includes a probe and the algorithm parameters are based on the type of removable module being used (see the specification on page 21, lines 4-5).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean and Paull, as applied to claims 1-7, 9, 11, and 13 above, and further in view of the prior art disclosed by Applicant on page 18, lines 24-27 of the specification [hereinafter Prior Art].

McBean and Paull disclose an electronic thermometer having all of the limitations of claim 8, as stated above in paragraph 3, except for the EEPROM being a 256 bit, 1-wire, parasite-power EEPROM.

The Prior Art discloses that a 256 bit, 1-wire, parasite-power EEPROM is a known EEPROM that is commercially available from Dallas Semiconductor under the model number DS2430A.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module of the thermometer disclosed by McBean and Paull by replacing the EEPROM with the EEPROM from Dallas Semiconductor, since the Prior Art discloses that the EEPROM from Dallas Semiconductor is known to be commercially available to one having ordinary skill in the art, and since these EEPROMs are alternative and equivalent means for providing memory in the electronic thermometer.

5. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBean and Paull, as applied to claims 1-7, 9, 11, and 13 above, and further in view of U.S. Patent 5,173,840 to Kodai et al [hereinafter Kodai].

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McBean and Paull disclose an electronic thermometer having all of the limitations of claims 10 and 12, as stated above in paragraph 3, except for the memory being encapsulated and the connections to the memory chip being protected from fluid incursion.

Kodai discloses a circuit board having semiconductor elements thereon. The elements on the circuit board and its connections are encapsulated by an overcoat of a moisture-resistant material for protecting them from being damaged by a liquid.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer disclosed by McBean and Paull by encapsulating the memory chip and its connections with a protective overcoat as disclosed by Kodai, since Kodai teaches that placing an overcoat on a semiconductor element is beneficial since it protects the element from being damaged by moisture.

6. Claims 14, 16, 17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBean and Paull, as applied to claims 1-7, 9, 11, and 13 above, and further in view of U.S. Patent Application Publication 2001/00043 16 to Denzene et al [hereinafter Denzene].

McBean and Paull disclose an electronic thermometer having all of the limitations of claims 14, 16, 17, and 19-21, as stated above in paragraph 3, except for the terminals of the removable module and the temperature-calculating unit being fluid-resistant.

Meinema discloses an electronic thermometer having a removable module that includes a probe assembly, wherein the probe assembly comprises a probe with a temperature sensor that is connected by an electrical cable assembly to a memory chip residing in a connector component,

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and a temperature-calculating unit. The temperature sensor is placed within the probe of the probe assembly in order to obtain temperature measurements of living bodies.

Denzene discloses an electrical device having a connector component that is fluid resistant. The area of the connector component that has connecting terminals is made resistant to fluid incursion in order to prevent the electrical components within the connector from being damaged by liquids (see Figures 6 and 7).

Referring to claim 14, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module and the temperature-calculating unit disclosed by McBean and Paull by making the mating terminals fluid-resistant, as disclosed by Denzene, since Denzene teaches that making the mating terminals fluid-resistant is beneficial in order to prevent the electrical components within from being damaged by liquids.

Referring to claims 19-21, the module-specific algorithm parameters in the memory chip of the thermometer of McBean, Paull, and Denzene are "probe-identifying" parameters since the removable module includes a probe and the algorithm parameters are based on the type of removable module being used, which is determined by the unique identification serial number stored in the memory (see the specification on page 21, lines 4-5).

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean, Paull, and Denzene, as applied to claims 14, 16, 17, and 19-21 above, and further in view of Kodai

McBean, Paull, and Denzene disclose an electronic thermometer having all of the limitations of claim 15, as stated above in paragraph 6, except for the memory being encapsulated.

Kodai discloses a circuit board having semiconductor elements thereon. The elements on the circuit board and its connections are encapsulated by an overcoat of a moisture-resistant material for protecting them from being damaged by a liquid.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer disclosed by McBean, Paull, and Denzene by encapsulating the memory chip with a protective overcoat as disclosed by Kodai, since Kodai teaches that placing an overcoat on a semiconductor element is beneficial since it protects the element from being damaged by moisture.

8. Claim 18 is rejected under 35 U. S.C. 103(a) as being unpatentable over McBean, Paull, and Denzene, as applied to claims 14, 16, 17, and 19-21 above, and further in view of U.S. Patent 4,008,614 to 6,179,785 to Martinosky et al [hereinafter Martinosky].

McBean, Paull, and Denzene disclose an electronic thermometer having all of the limitations of claim 18, as stated above in paragraph 6, except for the sensor being a thermistor and the calibration parameters being resistance values.

Martinovsky discloses an electronic thermometer having a probe assembly comprising a probe, and a temperature-calculating unit. The probe utilizes a thermistor as the temperature sensor. The calculating unit has calibration information that includes at least two calibration resistance values of the thermistor, wherein each of the values are taken at different temperatures.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer disclosed by McBean, Paull, and Denzene by

using a thermistor as the temperature sensor in the probe, since Martinosky teaches that a thermistor is useful for measuring temperatures when using a probe. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer disclosed by McBean, Paull, and Denzene by using resistance values as the calibration parameters in the temperature-calculating unit, since Martinosky teaches that these values provide calibration information when using a thermistor.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean in view of Paull, Denzene, and Martinosky.

McBean discloses an electronic thermometer comprising:

a removable module (20) having mating terminals (26, 32, 30, 28). The removable module has a temperature-sensing assembly formed by a temperature sensor (22) connected to a memory chip (EEPROM 24) that stores calibration information and module specific algorithm parameters, and a cable assembly having a connecting portion with mating terminals for electrically connecting to a temperature calculating unit, and

a temperature calculating unit (36) having a header assembly with terminals (44, 46, 50, and 48) in electrical connection with a microprocessor system, wherein the header assembly removably mates with the terminals of the removable module.

The memory is connected to the connecting portion and is capable of electrical communication with the temperature calculating unit when the removable module is installed to the calculating unit, and the calibration information includes at least two calibration reference point parameters wherein each of the parameters are taken at different temperatures. The

memory chip stores a unique identification serial number to identify the type of module being used (see column 2, lines 37-68, column 3, lines 1-16, 20-38, and column 5, lines 8-10).

McBean does not disclose the temperature sensor of the removable module being in a probe connected to the removable module, wherein the removable module has storage for a supply of disposable probe covers, the removable module and the temperature calculating unit having fluid-resistant mating terminals, the sensor being a thermistor, and the calibration parameters being resistance values.

Paull discloses an electronic thermometer having a temperature-sensing module that includes a temperature sensor in a probe connected to the module. The temperature sensor is placed within the probe in order to facilitate taking temperature measurements of a person. The module stores the temperature sensitive probe in a chamber in order to protect the probe when it is not being used, and has a chamber housing a supply of disposable probe covers attached thereto in order to have clean probe covers readily available to a person using the module when taking temperature measurements.

Denzene discloses an electrical device having a connector component that is fluid resistant. The area of the connector component that has connecting terminals is made resistant to fluid incursion in order to prevent the electrical components within the connector from being damaged by liquids.

Martinosky discloses an electronic thermometer having a probe assembly comprising a probe, and a temperature-calculating unit. The probe utilizes a thermistor as the temperature sensor. The calculating unit has calibration information that includes at least two calibration

resistance values of the thermistor, wherein each of the values are taken at different temperatures.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module disclosed by McBean by placing the sensor in a probe connected to the module (thereby forming a probe assembly), as taught by Paull, when utilizing the module to measure the temperature of human beings since Paull discloses that using a probe is beneficial when measuring the temperature of a living body. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module disclosed by McBean by adding a chamber for storing the temperature sensitive probe in the module, and a chamber for storing a supply of disposable probe covers, as taught by Paull, in order to protect the probe when it is not being used and have clean probe covers readily available when using the module to take temperature measurements.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the removable module and the temperature-calculating unit disclosed by McBean by making the mating terminals fluid-resistant, as disclosed by Denzene, since Denzene teaches that making the mating terminals fluid-resistant is beneficial in order to prevent the electrical components within from being damaged by liquids.

In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer disclosed by McBean by using a thermistor as the temperature sensor in the probe, since Martinosky teaches that a thermistor is useful for measuring temperatures when using a probe. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermometer

disclosed by McBean by using resistance values as the calibration parameters in the temperature-calculating unit, since Martinosky teaches that these values provide calibration information when using a thermistor.

Lastly, the module-specific parameters and calibration data in the memory chip of the thermometer of McBean, Paull, Denzene, and Martinosky are "probe-identifying" parameters and probe calibration data, since the removable module includes a probe and the parameters and data are based on the type of removable module being used, which is determined by the unique identification serial number stored in the memory (see the specification on page 21, lines 4-5).

10. Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBean and Paull, as applied to claims 1-7, 9, 11, and 13 above, and further in view of U.S. Patent 4,619,271 to Burger et al [hereinafter Burger].

McBean and Paull disclose an electronic thermometer having all of the limitations of claims 23 and 25, as stated above in paragraph 3, except for the removable module having a chamber that prevents storage of the probe while a cover is installed on the probe.

Burger discloses an electronic thermometer having a module with a probe storage chamber that prevents storage of the probe while a cover is installed on the probe in order to prevent contaminating the probe storage chamber.

Referring to claims 23 and 25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chamber of the removable module disclosed by McBean and Paull by making the chamber such that it prevents storage of the probe

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while a cover is installed on the probe, as disclosed by Burger, in order to prevent contaminating the probe storage chamber.

Further referring to claim 25, in utilizing the device disclosed by McBean, Paull, and Burger above to measure temperatures, the method steps of claim 25 would inherently be followed.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean and Paull, as applied to claims 1-7, 9, 11, and 13 above, and further in view of U.S. Patent 4,790,324 to O'Hara et al [hereinafter O'Hara].

McBean and Paull disclose an electronic thermometer having all of the limitations of claim 23, as stated above in paragraph 3, except for the chamber for storing the supply of disposable probe covers being transparent for viewing the probe covers.

O'Hara discloses a thermometer having a module with a transparent chamber for storing clean probe covers. The housing is transparent in order to quickly see how many covers remain in the chamber and determine if the chamber needs to be filled with covers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chamber of the removable module disclosed by McBean and Paull by making the chamber storing the covers transparent, as disclosed by O'Hara, in order to see the covers and quickly determine if the chamber is empty.

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean, Paull, Denzene, and Martinosky, as applied to claim 22 above, and further in view of Burger.

McBean, Paull, Denzene, and Martinosky disclose an electronic thermometer having all of the limitations of claim 26, as stated above in paragraph 9, except for the removable module having a chamber that prevents storage of the probe while a cover is installed on the probe.

Burger discloses an electronic thermometer having a module with a probe storage chamber that prevents storage of the probe while a cover is installed on the probe in order to prevent contaminating the probe storage chamber.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chamber of the removable module disclosed by McBean, Paull, Denzene, and Martinosky by making the chamber such that it prevents storage of the probe while a cover is installed on the probe, as disclosed by Burger, in order to prevent contaminating the probe storage chamber.

13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBean, Paull, Denzene, and Martinosky, as applied to claim 22 above, and further in view of O'Hara.

McBean, Paull, Denzene, and Martinosky disclose an electronic thermometer having all of the limitations of claim 27, as stated above in paragraph 9, except for the chamber for storing the supply of disposable probe covers being transparent for viewing the probe covers.

O'Hara discloses a thermometer having a module with a transparent chamber for storing clean probe covers. The housing is transparent in order to quickly see how many covers remain in the chamber and determine if the chamber needs to be filled with covers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chamber of the removable module disclosed by McBean,

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Paull, Denzene, and Martinosky by making the chamber storing the covers transparent, as disclosed by O'Hara, in order to see the covers and quickly determine if the chamber is empty.

Response to Arguments

14. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents disclose temperature sensors:

U.S. Patent 4,276,888 to Smith et al

U.S. Patent 5,017,018 to Iuchi et al

U.S. Patent 5,169,235 to Tominaga et al

U.S. Patent 3,940,742 to Hudspeth et al

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 703-305-0930. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 703-308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7725 for regular communications and 703-308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

mj
April 17, 2003



Diego Gutierrez
Supervisory Patent Examiner
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